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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,843	04/06/2006	Shinichi Yanagi	288920US0PCT	5093
22850	7590	03/03/2011	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			OLADAPO, TAIWO	
			ART UNIT	PAPER NUMBER
			1771	
			NOTIFICATION DATE	DELIVERY MODE
			03/03/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/574,843	Applicant(s) YANAGI ET AL.	
	Examiner TAIWO OLADAPO	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-80 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26,27,33-35,37-54,56-73,75 and 77-80 is/are rejected.
- 7) ☒ Claim(s) 28-32,36,55,74 and 76 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The amendment dated 12/22/2010 has been considered and entered for the record. The amendment cancels all previous claims thus overcoming the previous rejections. New rejections of newly added claims are made in view of amendment.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 34, 37, 45, 47, 56, 64, 66, 75, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The structure in the claims comprises groups R¹ and R², however, the description recites R¹ as alkyl or alkenyl having from 5 to 350 carbon atoms, without reciting what R² represents. The claims are therefore indefinite and will not be treated on the merits.

4. Claim 43 recites the limitation "the lubricating oil additive" but does not refer to any previous claim for antecedent basis. The statement is therefore indefinite. In order to further prosecution, the claim is taken as an independent claim reciting "A lubricating oil additive."

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 26, 35, 39 – 41, 43, 46, 58, 59, 60, 62, 65, 77 – 79 are rejected under 35

U.S.C. 102(b) as anticipated by Chrisope et al. (US 5,360,562)

7. In regards to claim 26, Chrisope teaches lubricating oil composition such as automatic transmission fluid comprising additives such as antiwear/extreme pressure agents, and phosphorus and boron containing ashless dispersants (column 1 lines 55 – 66). The phosphorus and boron containing ashless dispersants are prepared from reaction products of boronated succinimides and phosphorus containing esters including di and trihydrocarbyl phosphates and di and hydrocarbyl phosphites and their sulfur analogues, which meets the limitations of the claimed reaction product of borated succinimide and phospho sulfurized hydrocarbon (column 9 lines 1 – 9, 25 – 42).

8. In regards to claim 35, Chrisope teaches the lubricating oil and additive, wherein the borated succinimide used in the reaction is prepared from reaction with boron compounds such as boron acid, boron ester, boron oxide, and preferably boric acid (column 9 lines 15 – 20).

9. In regards to claims 39, 41, 58, 60, Chrisope teaches poly-a-olefin synthetic base oil having a viscosity of from 2 to 10 cSt at 100°C (abstract).

10. In regards to claims 40, 59, Chrisope teaches the component B of the inventions such as the boron-containing phosphorus-containing dispersant present in general amounts of from 1 to 15% (abstract, column 12 lines 30 – 50).

11. In regards to claims 43, 46, 62, 65, 77 – 79, Chrisope teaches the claim limitation as previously stated.

Claim Rejections - 35 USC § 102

12. Claims 26, 27, 33, 38, 39, 43, 46, 48, 54, 57, 58, 62, 65, 67, 73 are rejected under 35 U.S.C. 102(b) as anticipated by Hata et al. (EP 1 142 983 A1)

13. In regards to claim 26, Hata teaches lubricating oil compositions for transmissions comprising a lubricant additive obtained by heating acidic phosphate ester and/or phosphite esters and their sulfur analogs with an amide-based dispersant containing boron [abstract, 0001]. The phosphates used in the reaction product are hydrocarbyl phosphates including alkyls having from 1 to 18 carbon atoms [0011 – 0015]. The borated imides include borated succinimides [0024]. The reaction product therefore meets the limitations of reaction product of borated succinimides with phosphor sulfurized hydrocarbons.

14. In regards to claims 27, 48, Hata teaches the lubricant additive wherein the phosphosulfurized hydrocarbon are alkyl phosphates as previously stated, which are structures comprising two alkyl groups bonded to phosphorus atom [0020, 002].

15. In regards to claim 33, Hata teaches the additive, wherein borated succinimides are prepared by reacting boron containing compound with succinimide [0024].

16. In regards to claim 38, Hata teaches the additive prepared from the reaction of phosphosulfurized hydrocarbon and the borated imide at temperatures of from 120 to 150°C (abstract).

17. In regards to claim 39, Hata teaches the additive present in a lubricating oil composition, wherein the lubricant comprises mineral or synthetic base oils [0034].

18. In regards to claims 43, 46, 54, 57, 58, 62, 65, 67, 73, Hata teaches the claim limitation as previously stated.

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Claim Rejections - 35 USC § 102

19. Claims 43, 44, 49 – 53, 62, 63, 68 – 72 are rejected under 35 U.S.C. 102(b) as being anticipated by Ryer et al. (EP 0 348 236 A2)

20. In regards to claims 43, 44, 49 – 53, 62, 63, 68 – 72, Ryer teaches a lubricating oil composition comprising a dispersant additive, wherein the oil can be mineral or synthetic oil (page 14 lines 20, 32), and the dispersant additive is a reaction product of succinimide and phosphosulfurized hydrocarbon prepared by reacting i.e. P_2S_5 and α or β -pinene which meets the limitations of the claim (abstract, page 13 lines 31 – 40, Example 1). The reaction product of pinene and olefin taught by Ryer is a phospho sulfurized hydrocarbon having two alkyl groups attached to a phosphorus atom and meets the limitation of claim 25 as evidenced by the applicant's specification (Applicant's Specification page 6 lines 5 – 17). The reaction products are prepared from boron-free succinimides according the claim.

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

23. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

24. Claims 42, 61, 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hata et al. (EP 1 142 983 A1) in view of Ishida et al. (US 2002/0072478)

25. In regards to claims 42, 61, 80, Hata teaches lubricating oil composition for transmissions comprising mineral or synthetic base oils but does not particularly recite the %C_A claimed. Ishida teaches transmission fluids similar to Hata [0002]. Ishida teaches the base oil can be mineral oil having %C_A of 10% or less which meets the claimed limitations [0024]. It would have been obvious for one of ordinary skill in the art to have used the mineral oils of Ishida as base oils in the invention of Hata, as they are suitable for use in lubricating transmissions.

Response to Arguments

26. Applicants' arguments have been fully considered but they are not persuasive.
27. The applicants have cancelled all previous claims and introduced new claims thus overcoming the previous rejections.

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28. The applicants argue that the new claims introduced only comprise reaction products of borated succinimides and phosphosulfurized hydrocarbons which is incorrect. Rather claims 43, 44, 49 – 53, 62, 63, 68 – 72 are directed to reaction products of succinimides and phosphosulfurized hydrocarbons only. Therefore, the rejections previously made over Ryer are reapplied.

Allowable Subject Matter

29. Claims 28 – 32, 36, 55, 74 and 76 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

30. The following is a statement of reasons for the indication of allowable subject matter: The claims require reaction products of borated succinimides with phosphosulfurized hydrocarbons which are reaction products of olefin and phosphorus sulfide. Neither Chrisope nor Hata teach reaction products of borated succinimides with reaction products of olefin and phosphorus sulfides. Although Ryer teaches reaction products of succinimides and phosphosulfurized hydrocarbons prepared from phosphorus sulfide and olefin reaction products, the succinimides are not borated succinimides according to the independent claim(s).

Conclusion

31. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAIWO OLADAPO whose telephone number is (571)270-3723. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

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like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TO

/Ellen M McAvoy/
Primary Examiner, Art Unit 1771